

Preliminary Revision – Basic Arithmetic 2

- 1 Calculate the area of a square with side length 12cm: I
A 48cm^2 B 288cm^2
C 144cm^2 D None of these
- 2 Calculate the volume of a cube with side length 5cm: I
A 30cm^3 B 125cm^3
C 150cm^3 D None of these
- 3 A rectangular prism has sides of length 9cm, 11cm and 12cm. Find its volume: I
A 32cm^3 B 339cm^3
C 594cm^3 D 1188cm^3
- 4 A cube has a volume of 4913cm^3 . Find the length of each side of the cube. I
A 70 cm B 8.4 cm
C 181 cm D 17 cm
- 5 Find the perimeter of a square of side 4.2 cm. I
A 17.64 cm B 74.1 cm
C 16.8 cm D None of these
- 6 A rectangular window is 2.4 m long by 0.8 m high. Find the cost of replacing the glass if glass costs \$12.50 per m^2 . I
A \$24 B \$80
C \$30 D None of these
- 7 The dimensions of a rectangular courtyard are 27 m by 36 m. Find the length of the diagonal across the courtyard. I
A 45 m B 63 m
C 31 m D 33 m
- 8 The area of the circle is given by the formula $A = \pi r^2$. What is the area of the circle of radius 3.2 m? Give your answer to the nearest square metre. I
A 101 m^2 B 32 m^2
C 129 m^2 D 8 m^2
- 9 The circumference of a bicycle wheel is 2.34 m. How far does the cyclist travel in 2000 turns of the wheel? I
A 854.7 m B 2340 m
C 4680 m D None of these
- 10 The radius of the Earth at the equator is approximately 6400 km. What is the circumference of the Earth at the equator. Correct to the nearest km? I
A 40 212 km B $1.29 \times 10^8\text{ km}$
C 20 106 km D 38 340 km
- 11 Increase \$680 by 10%. I
A \$68 B \$748
C \$612 D None of these

21**(12 MARKS)**

- A** The base length x of a square pyramid of volume v and perpendicular height h is given by $x = \sqrt{\frac{3v}{h}}$ **2**

Find x correct to two decimal places if $v = 640$ and $h = 7.45$.

- B** One light year (the distance light travels in a year) is 9 460 000 000 000 km. Express this number in scientific notation using three significant figures. **2**
- C** How many minutes are there between 12 noon and 4:25 p.m.? **2**
- D** The number of bacteria in a jar doubles every 30 minutes. If there is one bacterium initially present, how many will there be after 6 hours? **2**
- E** Two months after joining an aerobics class, Matthew had reduced his weight by 15% to 57.8 kg. What was his original weight? **2**
- F** A tap is dripping water at a rate of 90 drops per minute. Each drop is 0.3 mL. How many litres drip from the tap in a day? **2**

22**(12 MARKS)**

- A** How many 20 mL bottles could be filled from a litre container of fluid? **2**
- B** How many litres of water will be held by a pool of 2400 m³? **2**

- C** In seven innings, a batsman scored 23, 48, 9, 0, 39, 28 and 63 runs. Find his average score. **2**

- D** Eighty-two metres of material at \$8.99 per metre is made into seven curtains of equal size. Find the cost of each curtain. **2**

- E** John wants to concrete a floor to a depth of 10 cm. The floor is 5 m long and 3 m wide. How many cubic metres of concrete does he need? **2**

- F** The average human heart beats 36 921 400 times in one year. Express this figure in scientific notation, correct to 2 significant figures. **2**

23**(12 MARKS)**

- A** A discount of 15% is given on the marked price of a leather coat. Find the price paid for a coat marked at \$450. **3**
- B** A typist does a typing course and increases his speed from 40 words per minute to 60 words per minute. Find the percentage increase in his typing speed. **3**
- C** If a car that cost \$5000 is sold for \$6000, what is the percentage profit compared to the cost price? **3**
- D** If 35% of a number is 280, what is the number? **3**